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THE EFFECT OF SUBSISTENCE PATTERNS ON MOTIVES AND VALUES.

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DESCRIPTORS- *MOTIVATION, *VALUES, *ECONOMIC FACTORS, *CULTURAL FACTORS, *ECONOMIC STATUS, *CULTURAL DIFFERENCES, SOCIAL MOBILITY,

TO TEST THE THEORETICAL CONCEPT THAT THE ECONOMIC PRACTICES OF A GROUP WILL DETERMINE THE SOCIAL STRUCTURE, IDEOLOGY, CHILD-REARING PRACTICES AND DISTRIBUTIONS OF PERSONALITY CHARACTERISTICS OF THAT GROUP, A CROSS-CULTURAL STUDY WAS CONDUCTED. DIFFERING OCCUPATIONAL GROUPS WERE STUDIED--TRAPPERS, HORTICULTURISTS, AND PARTICIPANTS IN INDUSTRIAL SOCIETY WHO WERE CONSIDERED IN THE THREE SOCIAL CLASSES OF HIGH, MIDDLE, AND LOW. THE TRAPPERS SELECTED WERE CREE OF JAMES BAY, LIVING IN ONTARIO. THE HORTICULTURISTS SELECTED WERE THE MAYANS OF YUCATAN, AND THE INDUSTRIAL SOCIETY STUDIED WAS CHICAGO. THE SUBJECTS WERE RANDOMLY SELECTED AND INTERVIEWED. VALUES WERE MEASURED ON THE BASIS OF THE SUBJECTS' RESPONSES TO VERBALLY PRESENTED ITEMS, ADMINISTERED ORALLY TO THE TRADITIONAL GROUPS (TRAPPERS AND HORTICULTURISTS). NEED-FOR-ACHIEVEMENT WAS MEASURED BY SUBJECT'S RESPONSE TO SIX PICTORIAL STIMULI. NEED-FOR-AUTHORITY WAS MEASURED BY LIKERT SCALES. OF THE SEVERAL HYPOTHESES FORMED CONCERNING "VALUES," "MOTIVES," AND "SOCIALIZATION," SOME WERE CONFIRMED AND SOME WERE NOT. ANALYSIS OF THE REASONS WHY SOME PREDICTIONS WERE NOT CONFIRMED LED TO FURTHER ANALYSIS AND CONCLUSIONS THAT COULD BE OF VALUE IN FUTURE CROSS-CULTURAL STUDIES. THE AUTHOR CONCLUDED THE BASIC PREMISE OF THE STUDY WAS CONFIRMED BUT HE NOTED THAT MANY EFFECTS OF THE SUBSISTENCE ECONOMY ARE MEDIATED THROUGH THE SOCIAL STRUCTURE OR FAMILY SYSTEM AND THE CAUSAL RELATION TO THE ECONOMY IS NOT DIRECT. SOME VALUES WERE FOUND NOT TO BE RELATED TO ECONOMIC PRACTICES. (AL)

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THE EFFECT OF SUBSISTENCE PATTERNS ON MOTIVES AND VALUES[1]

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Introduction

It would be an oversimplification, but one could argue that the major problem of the contemporary world is the differential production and allocation of wealth. While Marx viewed disparate growth rates in capitalistic countries as inherent crises of disunity and even war, it would seem that this may be true in communist countries--or even between factions--right or left--in any country. We do not wish to reduce all social questions to economic determinants; Marxism is not only inadequate for a study of contemporary social phenomena, but misleading. Notwithstanding, the denial of social phenomena correlative with economic variables is to grossly limit the possible understanding of human behavior. In a scientific manner the social scientist asks a Kantian question--what makes economic amelioration possible, for nations, or for groups within nations. While formal economics might explain how this process takes place, we seek to know why. For example, Texas is one of our richest states, yet it shares a long border with Mexico. Both have similar resources, similar climates and are parts of constitutional democracies. Surely the differences must lie in the people. The social scientist must isolate those characteristics of social structures that impede or foster economic advance, explore cultural values which foster or limit scientific curiosity, and ask why some individuals succeed or fail in educational pursuit.

Background

These problems have been explored by social scientists beginning perhaps with Weber (1905), who demonstrated that Protestantism fostered values of self-reliance, and a "this worldly asceticism" which, in turn, were conducive to business success in a competitive market economy. McClelland (1961) has interpreted Weber's work to show that in fact, Protestantism fostered the need for achievement. In societies, n-ach, as a group index, is associated with such parameters as growth rates, electrical consumption, educational attainment, preference for entrepreneur occupations (ibid. passim).

But McClelland and Weber really do not answer the question they raise; in fact they unknowingly retreat into Hegelian idealism by considering values

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as a priori causal factors. While we do not deny the role of values in influencing human behavior, they do not arise sui generis--unrelated to anything but themselves. Why are values such and how do they change? Values and motives, we would argue, stem from the demands of the occupational roles and the social structures contingent upon a given form of subsistence economy. Julian Steward (1955) demonstrates that for each level of sociotechnical development, there is a "cultural-core" of similar social structures. We would extend this and say that each level of economic practice and corresponding social structure generates certain behavioral and evaluational demands.

We can thus expect different child rearing practices as a function of subsistence methods. Barry, Bacon and Child (1959) for example, find that the level of food accumulation in a society is related to the child-rearing values. Hunters and trappers stress independence and self-reliance, while horticulturists and pastoralists in sedentary residential situations expect obedience and responsibility. Mead (1938) found that horticultural societies fostered cooperative behaviors, competitive societies fostered early education in occupational pursuits. In industrial groups, socialization practices have been found related to the parents' economic role by Miller and Swanson who compared "entrepreneurial" occupations, self-employed professionals or merchants with "bureaucratic" occupations found in large corporations. "Entrepreneurial" parents stressed achievement and competition; "bureaucrats" emphasized cooperation, adjustment and interpersonal skills. Kohn found that middle-class occupations involve the manipulation of interpersonal relations and/or symbols, self-direction and individual action. Correspondingly, middle-class socialization patterns manifest concern for a child's motives and degree of self-control. Working-class occupations involve concrete objects, obedience to authority and collective actions; hence the child-rearing patterns show greater concern for external rules and immediate effects of behavior. Working-class parents tend to be more authoritarian and demanding of obedience; middle-class parents tend to be acceptant and equalitarian.

The socialization practices fostering n-ach have been studied by Winterbottom (1958), Rosen and D'Andrade (1959), and Strodtbeck (1958). Summarily two important practices, independence training, and achievement training have been delimited. The former encourages a child to be autonomous and self-reliant. The earlier the expected age and the greater the rewards for independence, the greater the subsequent n-ach. Fathers contribute to independence training by permitting the child to act autonomously.

In sum, while there exists certain data indicating the relationships of the economy with child-rearing values and personality distributions, there is not as yet a cohesive theory based on empirical data which integrates all these aspects.

Theory

The major premise of this study is that the economic practices of a collectivity will affect other aspects of that group and cause that group to differ from other groups. There will be differences in the social structure, values, motives and even the way in which the young are raised.

Economic practices are the means by which a group adapts to its natural habitat. Economics includes the interaction patterns associated with the production (technology) of materials necessary for physical existence as well as the allocation of those goods between parties. Not all production need be related to survival per se in fact, in modern societies a very small proportion of production is concerned with these problems.

A collectivity, that sum of interacting persons sharing cultural values, language, etc., is an equilibrium system of functionally interdependent subsystems. The basic function of the collectivity is to maintain the physical being of its participants. Economic activity (as a subsystem of the collectivity) then, to the extent that it provides ecological adaptation, will have effects throughout the system--even in non-economic activity. Differential subsistence practices will determine patterns of social interaction in each group that serves to maximize the adaptive capacities of that group. Further, the social system is dynamic and in constant reintegration of its elements. Social elements such as values, motives, lineage systems, etc., which may have been conducive for a certain mode of subsistence are often maintained even when new economic patterns are introduced. Such factors can foster or impede development. Over a period of time, the equilibrium of the system will tend to maximum stability and certain social elements will become vestigial, others will predominate.

Investigation is the breaking down of complex phenomena into analytically discrete elements capable of measurement and comparison. Those elements which have been shown to be most closely related to economic behaviors e.g., values, motives, and socialization practices, are in no way wholly descriptive of a collectivity. To relate these elements to economic practices, certain dimensions of economic behavior must be indicated.

The most important factor that can be considered is that subsistence methods will limit the size of population, and thus determine the size and pattern of residence. The size of community and degree of geographical mobility will affect the nature of interpersonal relations. The nature of the economic task will vary in different forms of technical adaption. Some jobs are done alone, others are done in occupational groups, some in family units. The effects of the actions of a particular occupational role will range from concrete to abstract, from immediate response to long-range planning. A worker will have a degree of control over or be controlled by his endeavors. Occupational role includes expectations of adherence to traditional methods as well as the possibility of exploring new methods and techniques--though the importance of either may vary.

The interaction of the occupational system and the individual occur in the occupational role--that cluster of normatively sanctioned expectations and behaviors which insure physical survival to the person and to the group. But role is a descriptive concept and lacks a motivational component. Therefore, certain psychological needs are requisite to role enactment. These needs derive from the socialization experience. Every society will attempt to instill into its young, those motives and values necessary to insure occupational role performance. But, we must always remember that the occupational role demands are mediated through the family system which has boundaries discrete from the larger society.

Values are intellectualized, but not necessarily verbalized explanations and expectations which are shared by a collectivity. Values order and structure the worlds of social and physical experience. Values are the standards by which judgments take place, they sanction behaviors as legitimate or illegitimate. They orient choice and designate behaviors and feelings as functional or dis-functional. Thus values have a directive function in interpersonal relationships e.g., economic activity as collective behavior. In sum, values have directive, cognitive and judgmental characteristics.

While values may vary between groups, or even between individuals in the same groups, these exist certain basic existential situations common to all groups. Man relates to the world and to other people as he perceives them. He is an agent of activity in the world. He judges other people. His existence is temporal and he is conscious of that fact. He must raise his young to fit into his society.

These basic dimensions of existence are not exhaustive; many other classifications can be used. These parameters however, permit a patterning of choice that will show the variabilities between societies, the differences between individuals in a given group, or differences between sub-cultures in a large collectivity. The possible choices will be the same, the patterning or ranking of preferences will vary in each group.

There are certain basic value problems which will be considered. Activity can be valued as task oriented, competitive, accomplishment-oriented (doing) or a hedonic enjoyment of life, sociability and sensuality (being). People can orient themselves toward the past, present or future. They can prefer relating to others as individuals, groups, or superiors/inferiors (lineal). Human nature can be good, bad or neutral; fixed or changeable. The world can be seen as powerful over man, subservient to human interest, or in harmony with the social life.

Motives, as determinants of action are inferred constructs which in fact indicate the probabilities of an individual's behavioral manifestations--given certain antecedant conditions. Motives are learned and are thus different than biological needs or reflex behaviors. This is not to deny the biological nature of needs, rather, in most cases the responses associated with need satisfaction are socially patterned. Drives, learned or inate, are aroused by certain cues from within or without. The arousal of a drive will lead to behaviors that will tend to satisfy that drive.

The need for achievement, n-ach, is defined as a socially learned affective drive which is aroused by cues from situations which involve competition with a high standard of excellence, the satisfaction of that drive depends on the attainment of high goals. N-ach is learned early in life and is associated with socialization practices that foster independence and achievement.

In most human groupings there are needs for coordination and integration. The power to control social action is authority, which thus defined, patterns social relationships in terms of domination-subordination, whether parent-child, teacher-pupil, king-serf, or cleric-layman. In itself, authority is <u>necessary</u> to define positions in a social hierarchy as well as to integrate the various stratum.

As a cultural value, authority will indicate the power of leaders, the degree of obedience expected by subordinates and define the limits or boundaries of social control. In a group, authoritarianism is the high need for that group to have clearly defined patterns of the delineation of power and to structure relationships in terms of superiority-inferiority. Psychologically, the need for authority can be defined as a learned cluster of variables which include individual needs for relationships based on domination-subordination, as well as intolerance, of ambiguity, compulsiveness, conventionality, projection, anti-intraception, aggression, etc. One point is worth noting, the need for aggression is not usually expressed, in fact, aggression is oppressed and the authoritarian is not likely to manifest or approve direct expression of aggression.

Socialization is the systematic presentation of rewards and punishments whereby an individual incorporates the behaviors expected by his social group. While usually synonomous with child-rearing, there are phenomena of adult socialization. Behaviors, attitudes, language patterns, etc., that are reinforced have a propensity to be repeated, those that are punished tend not to be repeated, or are expressed in other ways. Socialization is the means by which motives are instilled. The socialization experience can be seen as a sequential presentation of role expectations, which enable eventual participation in the adult roles. Socialization, as meant herein refers to parental expectations regarding task performance of children. Therefore, one could argue that socialization is a particular area of values--parent vis-à-vis child. This author would agree and the separation is for analytic purpose, only. Note, however, that there is an implicit assumption that verbally expressed values reflect actual behavior and, in the area of socialisation, this cannot always be accepted as a fact.

To summarize these theoretical considerations, we consider a social system, a system of interdependent subsystems. The capacity of ecological adaptation is a function of the socio-technical system--those expected behaviors which constitute the occupational structure in a given subsistence economy. Values, which direct behavior and give order to life will serve to reinforce the expectations of the occupational role. But said role enactment will also require certain psychological needs. The inculcation of these needs and the learning of the values of a society are functions of the socialization system (usually the family structure) of the collectivity.

With these considerations in mind, certain hypotheses can be deduced. The economic practices will affect other systems as follows:

A. <u>Values</u>.

1. The intensity of activity of the economic life will affect the evaluation of activity.

2. Economic practices which require planning will foster orientations toward the future.

3. Relations toward others in the work role will foster these relations in other situations.

4. Control of the economic process, will foster the belief in the efficacy of human effort vis-à-vis the natural order.

5. No prediction regarding man as good, evil, or neutral, perhaps 150 years ago it might have been predicted that m.c. (middle-class) Protestants would choose evil.

6. People who are most adaptive in their economic roles will believe human nature is mutable.

B. Motives

1a. In industrial society n-ach should correlate with educational-vocational attainment (social class).

b. In traditional groups, semi-nomadic geographically mobile people should be more achievement oriented than sedentary horticulturalists.

2. In industrial society, n-auth should be highest in the lowest groups.

3. N-ach, which is a part of a cluster including self-reliance, should be negatively associated with n-auth which is reliance on authority.

C. Socialization (Mediates the occupational system through the family system)

1. Persons independent in occupational-social roles will foster independence in their children.

2. Groups that are work oriented will expect their children to be.

3. Adults will expect their children to show their orientations to other people.

4. Adults will expect their children to share their time orientations.

5. Parents who feel powerful over the world will expect their chi dren to feel this way.

6. Parents with high n-ach will expect more independence in their children.

7. Geographically mobile groups will expect more independence than non-mobile groups.

Method

A. Samples

To explore these differential distributions of motives, values and socialisation practices, as a function of variation in mode of subsistence, two traditional societies were compared to an industrial group. It is important to note that "traditional" societies are not easily classed under the same rubric--there may be more variation between traditional societies than between industrial societies. Since this study is concerned with economic development, in terms of social evolution, three general steps could be outlined. These might be hunting-gathering, horticulture-pastoral, and finally urban-industrial. While each stage can be further classified, this is sufficient for this research.

Historically, the earliest form of subsistence consisted of hunting-gathering. Currently, selection of such a group presents great problems. In the United States most of the traditional hunters are living on reservations. This could have an extremely disruptive effect that might lead to spurious findings. There are some groups living in Canada that still practice trapping. But these groups also present a problem. The more traditional the group--the more difficult they are to get to. Further, these groups tend to be very small and finally, very few members speak English. On the other hand, those who are accessible and speak English will also show effects of acculturation. The latter choice was decided upon when such factors as available time and funds were considered. It should be noted that there is a certain amount of evidence that motives, values, etc., are not likely to change very drastically in a short time as a function of proximity to modern society. With these considerations, the group selected was the Cree of James Bay, living in Moosenee and Moose Factory, Ontario.

These people practiced trapping. The traditional economic life included seasonal migration. During the winter, the main group broke up into small family units consisting of from one to four interrelated nuclear families. Each small group had a specific area which it trapped. The work was hard, each day the men might walk many miles in sub-zero weather, tending his trap lines, and bringing back the catch--used as food--as well as for the pelt.

Caution should be taken when currently defining this group as traditional. For the most part, their material artifacts are from the white culture. Many speak English and a good many are literate. Many served in the Canadian Army in World War II in the European front. Trapping is no longer the prevalent economic practice. Most work in "white" occupations. The young leave the community to go to high school.

As an example of a horticultural economy, the Mayans of Yucatan were selected. They practice a way of life little changed from pre-Colombian times. These people tend to live in villages with surrounding fields, "milpas", in which corn is the main product. They do not use fertilizers, chemicals, hybrid seeds or modern tools. In fact, the only major historical difference is the use

of metal instead of obsidian for cutting instruments. Most of the women still wear native costumes. Some of the men wear manufactured shirts and pants.

The yearly cycle consists of slash and burn clearing of land, planting, weeding, harvesting and finally storing and selling of the crop. During the winter, they often hunt deer, but this is more of a recreational than economic pursuit. The people live in closely knit cohesive communities. Work is primarily done alone. The young males help the father until they are old enough to marry and have their own milpa. This period averages from about 10 or so to about 16-18.

Notwithstanding the simple horticultural economy, many have portable radios and are cognizant of world issues. All the young know who the "Beatles" are. Some of the men have worked as "braceros" in the U.S. Again, caution must be taken when they are termed "traditional".

The highest stage of economic development is the urban-industrial technocracy, mass society as its critics call it. It is in this group which has the highest levels of educational and vocational attainment. But, this group is by definition heterogeneous and pluralistic. The industrial sample was selected from residents of Metropolitan Chicago.

Chicago is one of the best examples of the modern industrial megapolis. Whereas, New York is primarily a market place, Chicago is also at the geographical center of most of American heavy manufacturing.

The American social structure is characterized by an achievement-universalistic system which highly rewards upwards mobility. Entry into this system, now highly bureaucratized, is dependent on certain levels of education/vocational preparation, which often indicate the ability to enact certain social roles rather than a specific occupational skill per se. The system is highly fluid and as a result the predominant family pattern is the semi-nomadic nuclear family. The universality of achievement goals, and differential allocation of achievement means results in a functional system of stratification, a dysfunctional system of crime, and a <u>declassé</u>--or marginal element of bohemians, musicians, actors, intellectuals[2], etc.

Industrial society is inherently stratified; which this study is not of stratification per se; it is necessary to make socio-economic class distinctions. This study used middle, working, and low class designations--which are not exhaustive. The middle-class occupations are primarily cognative and/or interpersonal, usually requiring extended formal education--which often serves primarily as a mechanism for adult socialization, that is the training of role-appropriate behavior rather than acquisition of a formal occupational skill. The working class occupations are more likely to involve skilled labors and solidarity organizations (unions). The lower class occupations are primarily those involving manual labor and/or routine tasks.

B. <u>Selection</u>

The method of selection of the samples varied for each population. Since several questions for the interview schedule required experience with an adolescent

child, participants selected had to have at least one child in this age range which was broadly defined as between 10 and 20. Within adults of this age range, values, motives, etc., are fairly stable, occupational role is generally at a constant level, adjustment is neither a function of youthful initiation into an adult role or the decline and withdrawal that accompany increasing age. Fathers were expected to be employed although in some cases there were situations of recent retirement, temporary or seasonal unemployment.

In the traditional groups it was necessary to employ a native speaking interpreter.[3] Through his help qualified persons were located and asked to participate. Cooperation was in general very high.

In the Mayan society all of the subjects were engaged in horticulture, either as owners of their own "milpa" (cornfield) or working on a large henequen farm. In the Cree, only about 20% still actively pursued trapping as their major occupational role. Subjects were included as trappers if they had been trapping when they were young, e.g., when beginning their own families. In a few cases, subjects were included who had not trapped since adolescence. However, despite the entry into the "white man" occupations, trapping was still a highly valued part of their life.

In the industrial society, initial selection was based on the selection of names from census information which indicated the general socio-economic status of the area. Several areas were chosen. These people were sent a form letter seeking their cooperation by returning a card asking for family, occupational, and educational status. Where there were not enough subjects, houses in these areas were selected at random and the occupants asked to participate. In no case was a subject known to the interviewers prior to this study or obtained thru their friends.

In the lower class group, after many other futile approaches through agencies, welfare groups, etc., the interviewer canvassed an area with a large concentration of these people and interviewed any family who would answer the door, qualify and consent. They were subsequently asked to recommend friends who might comply. Since these referrals were usually followed up on the same night, the chances for intercommunication were very small. Most of these subjects did not have phones.

While initial selection was primarily based on residence, to precisely determine socio-economic status, the following were considered: area of residence, type of residence, education, and occupation (which had a double weight).

In the Mayan there were 22 interviews, the Cree--30, middle class 21, the working class 20, and the lower class 20.

C. Data and Instrumentation

The independent variable of this study was the differential practices of economic subsistence in three different cultures. This data was derived from ethnographic research, observation, interview, and in the industrial sample, personal experience. The different economics were briefly described above.

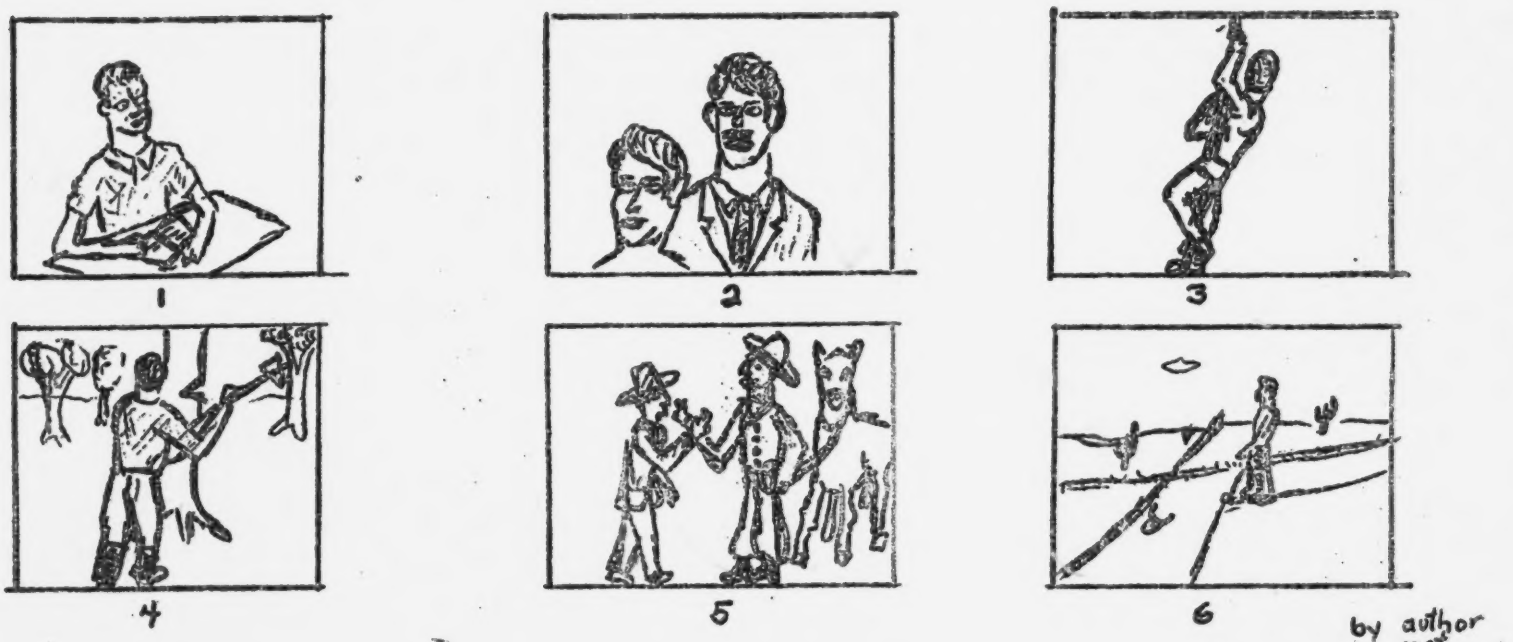
The dependent variables were measured on the basis of subjects' answers to an interview schedule combining projective techniques, semi-structured interview questions and a written questionnaire--verbally administered in the traditional groups.

Values, as previously described, were measured on the basis of subjects' response to a series of verbally presented items, most of which presented a behavioral situation with choice being a patterning or ranking of alternations. These questions were drawn in part from Kluckhohn and Strodtbeck, 1961. The following dimensions were considered:

1. Activity	a. Being, the hedonic enjoyment of life b. Doing, competitive, active task orientation		
2. Time	a. Past b. Present c. Future		
3. Relations	a. Collateral--orientation to the group preference toward being in a group, peer or collateral kin situation b. Lineal--preference to pattern relations on the basis of domination--subordination c. Individualistic--preference to be by oneself, to be reliant on the self.		
4. Man: World	a. Under--man is subjegated by and acted upon by forces in the natural and supernatural worlds b. Harmony--man and nature work together c. Over--man is an active agent, powerful over the natural world.		
5. Human nature as	a. Good b. Neutral c. Evil	and	a. Mutable b. Immutable

N-Ach--was measured on the basis of the subjects' response to six pictorial stimuli. They were scored in the standard way as outlined by Atkinson 1958. The only slight variation in scoring was for card #5. When the two individuals were seen as "bargaining" or "trading" for the horse, this was interpreted as a "competitive" situation with goals of excellence and scored AI (achievement imagery)[4]. The same cards were used in all groups. Cards #2 and #5 were retouched in the Yucatan sample to make the people look more "Mayan". Card #6 had a stone rather than a wire fence. These pictures were derived from previous studies except for #4 which was drawn for this study. When the man was seen as clearing land for

his <u>future</u> use, e.g., to build a home, have a farm, etc., accomplishment, and scored AI.



by author not original artist

Card #1 comes from a combination of McCle'land, <u>ibid</u>. and Murray 1938, #2 and #3 from Murray, <u>ibid</u>, and #5 and #6 are variations from Henry 1956. Card #3 was scored AI only when there was <u>explicit</u> statement of competition, e.g., a contest or meet. Description as a gymnast or performer was not scored AI.

The need for authority, n-auth, was measured by using many of the original F-scale questionnaire items, Adorno <u>et.al.</u> (1950) and some items by ~~Levinson~~ Watson (1955) especially concerned with compulsiveness. There were 48 items which the subjects were asked to enclose in terms of strongly agree, mildly agree, mildly disagree, and strongly disagree, e.g., a four-point Likert scale. These items positively endorsed, contributed to the total index of authoritarianism. There were four subscales to measure conventionality, submission, aggression and compulsiveness.

Criticisms have been raised that in fact such items measure compliance or acquiescent sets. Couch and Keniston (1960) however argue that only 14% of the variance could be explained this way.

The items were translated into Spanish and Mayan for the Yucatan sample. Since, however, the items had to be read to the subjects, this procedure was discontinued after the initial interviews because it went beyond the attention span of the subjects. Similarly in the Cree, this was not measured.

Socialisation was measured in terms of parent's response to questionnaire items. Therefore, these responses may indicate goals or values rather than actual parental behaviors. Notwithstanding, there is recent evidence that parental <u>values</u> are in fact more important determinants of subsequent adult personality in children than are actual behaviors. This study was primarily concerned with independence.

This study measured independence in three ways. Independence was defined as the ability to act on the basis of internal rather than external sanctions, to rely on self rather than others. Firstly, as part of scale developed to tap value patterns specifically related to child rearing, the fathers were asked to choose between a preference for independence or obedience. Secondly, there were four behavioral situation items which tapped independence from parental and control and two that tapped occupational independence. Finally, the parents were asked at what ages certain tasks were expected of children. These 14 items were drawn from Winterbottom 1960. The lower the mean age level, the greater the expectation for independecne and achievement oriented behavior. Caution should be taken in interpretation. In industrial groups, separate responses by mothers and fathers to a written questionnaire revealed little mean difference. In traditional groups, the questions were verbally administered and in most cases the answers were solely by the fathers.

In addition to the concerns with independence, parents were asked to rank the relative importance of the values previously considered--when specifically related to expectations of child performance.

D. Analysis

The analysis of the data reported in this study varied with the type of data. The value choices were such that answers were patterned in terms of most preferred, second choice and not chosen. These were assigned a value of 3 (most) 2 (second) and 1 (not chosen). A summation of these scores indicated the preferential values of the group as well as the secondary. The significance of the patterning was determined by the difference of the obtained scores from the score expected by chance. The sum of the squares of the differences will yield the level of significance based on Kendall's S (see Strodtbeck and Kluckhohn, op. cit., Chapter IV). Where value choices were limited to two choices, X^2 was used.

N-ach was scored in the standard manner using the system of McClelland (see Atkinson op. cit.). The stories were scored by a trained coder who was ignorant of the hypotheses of the study. No attempt was made to disguise the culture from which the stories came--there was obvious cultural content. Interjudge reliability for the total score was based on rank order correlations between an independent rater and the project director. In most cases the average correlation was .90.

N-auth scores were based on F-scale numerical totals from the Likert scales. Each endorsement was scored as follows: 4 3 2 1. Each subscale was scored in the same way.

Independence was measured in these ways. Firstly, there were six items presenting a choice between a person acting on his own--relying on parents. The number of endorsements of the independence choice gave each subject his score. The group means were compared by T-tests for significant differences.

The parents in each group were given a questionnaire and asked the expected age for mastery of 14 tasks. The means of each group were compared by T-tests.

The socialization values were scored in the same way as the other values.

In the written questionnaire there were also four items, endorsements of which indicated expected obedience. They were scored in the same way as the F-scale.

RESULTS

GROUP

Variable	M.C. (Middle Class)	W.C. (Working Class)	L.C. (Lower Class)	Cree	Mayan
Values[1]					
Activity	Doing>Being	Doing>Being	Doing>Being	Doing>Being	Being>Doing
Time	Future>Present>Past	Present>Future>Past	Future>Present>Past	Future>Present>Past	Future>Present>Past
Relations	Ind>Coll>Lin	Ind>Coll>Lin	Ind>Coll = Lin	Ind>Lin>Coll	Coll>Lin>Ind
Man: Nature	Over>With>Under	Over>Under>With	Under>Over>With	Under = With>Over	Under>Over>With
Human Nature	Good = Neutral>Evil	Good>Neutral>Evil	Good>Neutral>Evil	Neutral>Good>Evil	Good>Neutral>Evil
	Mutable	Mutable	Mutable	Mutable	Mutable
Needs					
N-ach	7.14	3.46	2.15	5.10	5.14
N-auth	120.00	132.81	153.45	—	—
a. Conventionality	27.6	31.4	33.1		
b. Submission	31.9	37.1	46.7		
c. Aggression	29.5	30.0	36.8		
d. Compulsiveness	23.3	24.3	27.8		
Socialization					
Independence[2]	3.52	3.31	2.75	2.93	1.14
Independence[3]	6.43	7.70	9.39	9.12	11.99
Obedience[4]	9.52	10.20	12.5	—	—
Values					
Independence-Obedience	Ind>Ob	Ob>Ind	Ob>Ind	Ob>Ind	Ob>Ind
Activity	Doing>Being	Doing = Being	Doing = Being	Doing>Being	Doing>Being
Time	Future>Present>Past	Present>Future>Past	Present>Future>Past	Future>Past>Present	Present>Past>Future
Relations	Ind>Coll>Lin	Ind = Coll = Lin	Ind = Coll = Lin	Lin>Coll>Ind	Coll>Lin>Ind
Man: Nature	Over>With>Under	Over>Under>With	With>Over>Under	Under>Over>With	Under>Over>With

[1] Where > is shown, difference is significant at least $p > .05$.

[2] Mean for 6 items.

[3] Expected ages of performance for 14 items.

[4] Sum for 4 items (Likert scale)

The above chart indicates the profile of responses of each group--as a group. We can now go back to the original hypotheses of the study.

A. Value

1. The intensity of activity will affect the evaluation. In all groups except the Mayan, there is little food accumulation and work must be constant. Further, the intensity of the Mayan life is cyclic, there are periods like clearing, planting, and harvesting which require much effort. During wintry and growing time, life is more relaxed. Therefore, all groups except the Mayans should place doing> being. Confirmed.

2. Economic practices which require planning will foster orientations toward the future. In the industrial sample, only the middle class occupations are future oriented. Both the traditional economies require planning and anticipation--especially during seasonal transitions such as spring--planting or returning to the community, or fall--harvesting or leaving for the trapping fields. Therefore, the middle class and traditional group should value the future, the working and lower class groups should be more present oriented. Partially confirmed--The lower class group valued the future and not the present as predicted. On further consideration however, one must note that most of these people came from poor oppressed regions--looking for a better future.

3. Work roles will affect other social relations. The following would then be expected:

M.C.,work alone--confirmed (Individualistic)
W.C.,work in groups--not confirmed (Individualistic,expected-collateral)
L.C.,usually alone--confirmed (Individualistic,expected)
Cree, hunt by themselves or small groups--confirmed (Individualistic,expected)
Mayan, work by themselves--not confirmed (Collateral,expected-individualistic).

We must then ask why two predictions were not confirmed. For the W.C. there are possible reasons. Firstly, the strong explicit importance in our culture on individualism permeates throughout the society. Secondly, interview data not reported shows that in most cases, the W.C. actually do work by themselves, unions, factories, etc., notwithstanding.

The case of the Mayans who work alone prefering collateral relations causes us to reconsider the entire question. It would seem that in this case, the values are determined not by the economic practice per se, but by the

social structure contingent on the subsistence economy. If the original hypothesis is then recast in terms of solidarity of the social structure and not the occupational role, then all the results are explained. The modern industrial-urban complex carries within it inherent tendencies toward individualism, and in the extreme--alienation.[5]

4. Control in economic activity will foster the belief in the general power of man over the world. The expectation would be that only the M.C. do in fact have control over the economic process, these are the people who plan and direct research, sales, buying, selling, hiring-firing, etc. The traditional groups are almost wholly subject to the caprice of Nature. The L.C. occupations are at the lowest level of the hierarchy. The W.C. occupational tasks are subject to the dictates of management. Partially confirmed--the W.C. preferred the "Over" choice, when "Under" was expected. It would be supposed that the rapid proliferation of technology into daily life, as well as the fact that the general values of the M.C. permeate through the culture, might explain this. The Cree had "Under-With" which would still be logical in terms of the expectations. Further, this may evidence a remnant of totemism and the attribution of spirits to the woods and animals who often cooperate with the hunters.

5a. No prediction.

b. Economic adaptibility will foster belief of human nature as mutable. Only the M.C. have economic roles which expect rapid readjustments to new situations. We would expect them to be the only group believing human nature is mutable. Not Confirmed, all groups believed in the mutability of man. No explanation can be offered at this time. (No differences were found between Catholics or Protestants in the M.C., W.C. and Cree). Perhaps the wording of the item was such that it asked if there was a possibility of change rather than change per se.

Motives

1a. In industrial groups n-ach should correlate with social class. In this study, M.C. should be highest, L.C. lowest. Results: Confirmed.

M.C.	W.C.	L.C.		
7.15	3.46	2.14	M.C. > W.C.	$p < .05$
			M.C. > L.C.	$p < .001$
			W.C. > L.C.	$p < .05$

However, we should note this is consistent with previous research.

b. Hunters should show more n-ach than horticulturalists. The Cree should have more n-ach than the Mayans. Not Confirmed.

Several factors should be considered. Firstly, it is according to the thinking of Barry, Bacon and Child op. cit., that the hunting role expects independence, self-reliance and achievement. As reported above, most of the hunting (trapping) done by the Cree was done in small groups and not wholly alone. The Mayan tend to work alone for the most part. The Cree, while independent of the total band, are dependent on their family in the work situation. The Mayans, while independent in their work situation, are very dependent on group affiliation. Thus, while we have not explained the results, we are more cognizant of the fact that concepts like "independence", "achievement", and others like "authority" must be considered within certain social boundaries.

Further, the definition of n-ach includes arousal in situations involving competition with high standards of excellence. It does not seem that this term really applies to the Cree--and surely is alien to the Mayans. At the same time, these would not be called "cooperative" societies either. In fact, care should be made in using these terms out of context.

Finally, Barry et. al., base achievement rating of a society by ages of socialization into occupational role. It may well be that hunting groups have to take their children with them--horticulturalists can leave them home until they are strong enough to perform the required tasks. While trapping is difficult and must command admiration, a child can easily accompany his father or uncle in tending trap lines.

2. In industrial society, n-auth should be greatest in the lower skilled groups. In this study, n-auth should be highest in the L.C. ' west in M.C. Confirmed, ($p < .01$). This goes along with all previous studies. Those whose jobs are most subservient to a hierarchy will be those with greatest needs for submission. We also note that while the group mean for each subscale was highest in the L.C., the submission scale was sharply elevated.

3. N-ach should be negatively associated with n-auth. Confirmed, $p < .01$. While this finding has been expected and deduced by many, this is the first proof using data from the same samples.

C. Socialization

1. Social-occupational independence in adults will lead them to foster their values in children. This hypothesis must be tested separately for industrial, traditionals. In industrial groups we expect the M.C. to expect the most independence, the L.C. the least. There are four measures available. 1) independence questions, 2) expected ages of task performance, 3) choice of independence vs. obedience, and finally importance of obedience. Confirmed. Every measure was significant, or in the predicted direction.

	M.C.	W.C.	L.C.		Cree	Mayan	
Questionnaire	3.52*	3.31	2.75	$p < .05$	2.93	1.14	$p < .01$
Ages	6.43 yrs.	7.70 yrs.	9.39 yrs.	$p < .01$	9.12	11.99	$p < .01$
Ind-Obed	Ind	Obed	Obed	$p < .05$	Obed	Obed	NS
Obedience	9.52*	10.20	12.5	$p < .05$			

*Note--differences between M.C. and W.C. were NS but in predicted direction

The Cree would be expected to stress independence more than the Mayan. Confirmed. 2 out of three measures were significant at $p < .01$. We might note in passing that in these measures the Cree fall between the W.C. and L.C. groups.

2. Groups that are work oriented will expect their children to be. We would expect those groups who value Doing over Being will expect the same of their children. Partially Confirmed. In the industrial groups all chose Doing<Being in their value preference. While the M.C. also made this choice for their children, the W.C. and L.C. choice indicated an equal preference, Doing=Being. No explanation can be given at this time.

In the traditional groups, the Cree who chose Doing>Being did so for their children as well. The Mayans reversed themselves in this case and made the opposite choice for their children. We did however note that the M.C., Mayans and Cree had more n-ach than the L.C. or W.C. groups. Perhaps the hypothesis should be phrased in terms of achievement disposition and not preference for the evaluation of Doing-Being as work vs. enjoyment. Then all the results are consistent. We would then say that achievement dispositions in adults should foster work orientations in children--but not necessarily achievement value orientations per se, at least in traditional groups.

3. Adults will expect their children to share their orientations with other people. Not Confirmed. The M.C. who choose individualistic relations expected their children to do so, similarly, the Mayans preferred collateral relations and expected their children to do so. But the W.C. and L.C. groups preferred individualistic relationships indicated no preference for their children of any orientation. Perhaps this is due to the wording of the item. Similarly, the Cree preferred individualistic relations for themselves and lineal for their children. The only explanation at this time would be that the social boundaries must be considered e.g., the individual's patterns vis-à-vis the collectivity may not be the same as in the family. Many a man has advocated "free love"--but not for his daughter. Certain evidence for consideration of social boundaries comes from evidence obtained during the field research for this study. In the Cree there are strong expectations for obedience--in the family, the father-son relation. But the importance of obedience to superiors outside the family is minimal. For this reason, the "chiefs" of this group are in fact without any real authority in the sense of social power. Further the chiefs are elected to office and it is not clear whether or not this itself had not been introduced for convenience by the early white settlers. The sample included one chief and a former chief. Both were highly amiable people but the limit of their real authority was in their families.

4. Adults will expect their children to share their time orientations. Partially Confirmed. This was confirmed in the M.C., W.C. and Cree. The L.C. reversed themselves and chose the present over the future for their children, as did the Mayans. The only explanation that can be ventured is that again the boundaries must be considered. The economic system, to the extent that which it requires certain values, will also require certain expectations of child-rearing. But the economic system must be mediated through the family system to instill these virtues in the young. Certain values of the economic role may not be carried into the parental role--and, as we have attempted to demonstrate, the occupational role, a function of the subsistence economy, may include certain adult socialization experiences such that expectations and values must always be considered within clearly demarcated social boundaries. The transition through boundaries--in this case from child to productive economic role--will entail acquisition of new role--appropriate behaviors and values. Of course, the limits of such transitions are conditioned by the basic motivational dispositions acquired at earlier ages.

5. Parents who feel powerful over the world will expect their children to feel this way. Confirmed. The M.C. and W.C. chose "over" for themselves as well as their children. The

traditionals who felt subjigated--expect their children to feel subordinate. The L.C., however, are interesting, while they chose "under"--they expected their children to feel "with" and relegated "under" to least preferred. While not inconsistent with the hypothesis, it would also show an effect of urban life.

6. Parents with high n-ach, expect more independence of their children. Confirmed, in the industrial sample, not confirmed in the traditional groups. Thus, while motives and expectations of child behavior are related--the relation is not causal and must be considered in a social context.

7. Geographically mobile groups expect more independence of their young. Confirmed. In traditional groups, the Cree expected more than the Mayans. In industrial groups, the M.C. expected more than the L.C. But we should note that this group, in fact, consists of migrants from the south. Closer examination of the data, however, reveals that in most cases they had friends or relatives in the city who obtained a job for them and the move was necessitated by extreme economic hardship rather than basic predisposition.

   If we compare the extreme cases, the M.C. and the Mayans, we see that the M.C. expect their child to be half the age of Mayan children to perform certain tasks. The M.C. score three times higher on selection of independence items 3.52 - 1.14 ($p < .001$).

Interpretation

Extreme caution must be taken in interpreting the findings of this study. The basic interview situation can effect the findings--especially in other cultures. The L.C. and the Cree groups have been repeatedly interviewed in the last few years. There has not been any significant improvement in their standards of living as a result of this interviewing. The people realistically wonder whether such questions bring anyone any benefit, except the (paid) interviewers. To consider the contribution to basic research is beyond the capacity of some of these people. Finally, it often happens that literate members of these groups somehow obtain the studies describing them. Often the "facts" reported in these studies have no reality to the actual ways of life.

In the traditional groups, the instruments were translated into the local language and administered through an interpreter. This can effect the findings. Further error comes from the small sample size of each group and the few items used to measure each variable. Many of these items were alien to the usual cognitive modes of several of the groups. To generalize from two traditional groups to say that other groups at similar levels of socio-technological development will show similar patterns, cannot be accepted as anything more than an expression of need for further research along these lines.

It could be argued that the TAT as a measure of n-ach was, in fact, a measure of test taking ability on the part of middle class subjects reacting to a middle class investigator with a middle class test. However, it can be answered that the basic test taking situation is American and this argument would not explain why the traditional groups scored higher than the W.C. or L.C. groups--or the differences between these two American groups. If one then says that the difference depends on level of education--it would seem to be putting the cart before the horse because n-ach in children has been shown predictive of subsequent educational attainment. Further, the level of education of the traditional groups was lower than either the W.C. and L.C. samples. While n-ach scored on the basis of TAT responses is far from a perfect measure, the results reported could not be easily explained as artifacts of the test-taking situation.

N-auth cannot be explained solely as a test artifact or index of compliance (see Couch and Kenniston, 1960). In sum, we might add that the findings of this study are generally in agreement with other studies using different methods.

While there are many problems unanswered in the methodology of cross-cultural research, the findings of this study do not seem to reflect artifacts of the test materials.

The basic premise of this study was generally confirmed, but we must note that the effects of the economic system on other systems was not a demonstration of Marxian theory. Rather, many of the influences of the subsistence economy are mediated through the social structure or the family system and the causal relation to the economy is not direct. It has also been demonstrated that differential expectations of parents qua socialization agents result in various patterns of value acquisition and behavioral dispositions in the young. These values and motives in turn affect the economic system.

The predictions regarding the effects of the economy on the value system were generally confirmed--but the exceptions demonstrate the limits of the pervasiveness of the influence of the subsistence practices. It was shown for example, that the preferred modes in interpersonal relations were not a function of the occupational practices as such. Rather, the residential patterns and solidarity of the community are reflected in the evaluation and preference of different forms of interaction. While the subsistence practices determine such factors as geographic mobility, population density, birth and death rates, it is the social structure which mediates these economic factors and affects interpersonal relations.

It was also found that in the stratified industrial society that for four out of six value parameters, there were no subgroup differences. This would indicate that such factors as mass media, interaction with other groups, and a common urban environment introduce a certain homogeneity of values into a pluralistic society. We might add that most urban people share common individualistic preferences.

Finally, it was shown that there are values which are not related to the economic practices. There was no great difference between any of the groups in the belief in human nature as generally good or neutral and mutable. The only thing that all of the groups have in common is exposure to Christianity--from which we might expect the view of man as evil and damned. Rather attempt any explanation for this finding, it is enough to show the need for further consideration of problems of this sort.

The socialization system is also in an interdependent relation with the economic system. It is through the family that the motives requisite to role enactment are instilled. To determine if child-rearing practices are a function of the occupational role or the parental motives cannot be completely answered at this time. But we can say that parents of high educational-vocational attainment will expect more independence of their children and we can assume that these children will show greater dispositions for achievement (n-ach) and fewer dispositions to rely on superiors (n-auth) as a source of direction. These parents of highest attainment themselves show highest n-ach and least n-auth. It is difficult then in this case, to separate the effects of social class from motives. Some evidence that it is the social class variables, contingent on the occupational role, comes from the traditional groups where n-ach was unrelated to anything. It is most unfortunate that there was no measure of authoritarianism, but, if we consider it related to expectations of low independence and high obedience, we can assume n-auth to be high in the traditional groups. While this does not constitute a proof, there is a strong likelihood that while parental motives (and values) may affect social mobility, it is parental class contingent on the occupational role, which affects socialization patterns. It was clearly shown that the mobility patterns of the group affect the expectations of independence.

The effects of the economic system on child-rearing should not be too strongly stated. While it may determine certain parameters of socialization, there are many aspects not considered, such as: polygyny, nurturance, toilet training, etc., which are not related to specific socio-technical systems. Further, it must always be remembered that the family system is no more perfect a reflection of the cultural system, than a small group is an example of mass behavior. The family has clearly defined boundaries in which certain patterns of interactions and expectations are not generalized into behavior in the larger society. Thus, while a subsystem functionally interdependent with the social system, the family system has patterns which are unique. Certain values that parents hold in their occupational roles are not translated into behavioral expectations of children. In our culture, whereas status is generally accorded on the basis of universalistic achievement norms, in the family we find particularistic ascription evaluations. In the W.C. and L.C. groups, the adults choose Ind> Coll interpersonal relations, but in the family, no preference emerges. It seems that this is not a faulty measure but, within the family, there is greater conflict between the culturally prescribed individualistic (value) patterns (of the M.C.) and the authoritarian (need) preference of parent vis a vis child relationships based on superiority/domination and inferiority/subordination. The adult preferences for individualistic interpersonal relationships were found in all groups except the Mayans, but in terms of parental expectations of child performance, only the M.C. expected children to prefer the individualistic

pattern (and only the M.C. chose independent behavior over obedience).

Similarly, the Mayan and the L.C. adults chose the "future" time orientation, but when put into terms of expectations of child performance, they chose the present. We would imagine that as economic participants they are concerned with certain long range goals and plans, (perhaps unrealistic in the L.C.), as parents they are more concerned with the concrete, immediate effects of present behavior, rather than its ultimate consequences. We could go on to say that despite orientations to time, the concretistic occupations are more likely to be present oriented in child-rearing practices. However, the Cree were the least present oriented regarding children and the entire question must be left for future research.

The findings of this study cannot be said to adequately demonstrate proof of the theoretical hypotheses. Rather, there is sufficient evidence to indicate that future research of this type will be fruitful and that with further refinement of theory and method, important findings can be made. If anything has been conclusively shown, it is that simple cross-cultural studies that compare A and B ignore the fact that it may be C which causes this relation. Therefore, while as scientists, we need to isolate variables, if the gestalt is ignored, the baby is thrown out with the wash and we delude ourselves by accepting such findings.

The exact relationships of the occupational system to the values, motives, family patterns, child-rearing patterns, are not yet clear, but it is necessary that future research always be cognizant of the nature of a social system as an equilibrium system with functionally interdependent subsystems--each with determinate relationships to other systems, each with definite boundaries and unique laws of organization.

The research reported has been implicitly concerned with static relations and has not considered social change, the disrupting of the balance of the equilibrium system. As a system, change in any sector will affect other sectors. While there is no actual data reported, the evidence suggests that the major source of change in a social system will be the economic practices. As they change, we can expect values to change--and in turn, socialization practices. In any group, while we are usually concerned with means, we should also consider variability and the proportional distribution in a population of the presence of a particular motive or value. As a social system changes, those whose motives and values are most consonant with these changes will be most successful in adaptation to the changes, and these will become the opinion leaders of a group. They will tend to reproduce their motives and values in their young. Thus, social change should consider the economic practices and differential allocation of motives and values as the prime determinants.

Given an economic change, certain adults in a group, because the inherent variability in the distribution of motives and values are "better adjusted" to these changes. They tend to increase the proportionate distributions of their motives and values in the young children of the population. This generation, in turn, is more likely to have the motives and values requisite to role participation in the new economic system. Therefore, it would be a most informative research

to do a longitudinal study of traditional families and the outcomes of their children. We would expect that those children successful in the industrial society came from "deviant" families, who,due to random variability, instilled certain dispositions and beliefs into their children. If it were not for this variability in values and child-rearing practices, there could not be upward mobility from lower strata. If there were not increasing channels for mobility, there would be unfilled jobs, and economic retardation of the system.

These results have implications not only for the development of social theory and theory of social change, but have direct bearing on the problems--prompting this study of economic growth. By comparing the motives, values and child-rearing practices of those who have attained relevant affluence, to those who haven't, certain differentials obtain. But utmost caution must be indicated if one were to assume that by influencing these variables, these groups would then have greater educational-vocational attainment. This idea, implicit in the thinking of McClelland ignores the stark reality of economic facts.

This thinking carries the assumption that if certain factors influenced growth historically, then these factors will do so in other situations, or, if the development of an entrepreneurial elite led to rapid development, the fostering of an entrepreneurial class in an underdeveloped group will foster that group's development. This is not only untrue, but misleading. Even if we accept the theory of the "Protestant ethic" historically, in modern times, it is nationalism that acts as such an impetus. In fact, in many of the contemporary developing nations, the rise of an entrepreneurial elite has introduced civil problems hindering growth. The affluent minority--in conflict with a majority of less affluent traditional peasantry, is a factor in the civil strife of such places as: Indonesia, Viet Nam, Nigeria, India, Malaysia, etc. (Note in the latter case, Singapore, home of the Chinese merchants, was forced to withdraw from the Malasian Federation). Therefore, while perhaps unpleasant to the thinking of a Western democracy, the interests of an entrepreneurial elite must often be subordinated to a central government to minimize civil strife and insure the long range political stability--a sine qua non of development.

Secondly, the organization of a modern economy is characterized, not by the individualistic entrepreneur---but the managerial bureaucracy of the modern corporation--state or private. The channels for mobility are no longer the prudent merchant and manufacturer, the contemporary industrial situation requires far greater capital investment in terms of research and equipment than most individuals can possibly obtain.

Finally, there is a phenomenon analogous to "relative deprivation" (Merton) in terms of "conspicuous consumption" (Veblen). It is often found that as a group makes some development, the profits (usually from agricultural or mineral exports) are put into airports, television stations, atomic research, etc., and not invested in basic resources such as: hydro-electric power, internal transportation, basic industry, etc. This violates a Harrod-Domar model of (profit) saving-investment-growth. New governments which should be the agencies of forced

savings (through suppression of wages[6]) are often most guilty of squandering investments in the monuments and extravagances which only a wealthy society can afford.

Even with these considerations, the possibilities for influencing growth in terms of the parameters of this research are still optimistic. To determine those factors which are correlative, but not necessarily causal, we compare the M.C. of this sample to the other groups and isolate those values, etc., which significantly differ from the others.

Firstly, in terms of the values considered, we see that the orientation to nature is highly important. The M.C. felt that man was the dominant agent over the natural order. It would be strongly felt that the "this worldly asceticism" of the "Protestant ethic" left the world free of spirits and supernatural causes, and left man as powerful in this world. This value must proceed the development of the "rationality of the world", which enables scientific investigation--a necessity for the development of modern industrial economy.

Secondly, the M.C. were most achievement oriented in terms of n-ach. While mobility may no longer be through the classical pattern of the isolated entrepreneur, we do not deny the possibility of mobility--through the corporate channels--with education as the prerequisite for entry. And, it has been established that n-ach correlates with educational attainment (Rosen 1962). But, it must be re-emphasized that n-ach is not enough--there must be a cluster of motives and values. This is seen in the case of the traditional groups whose n-ach was higher than the W.C. or L.C. N-ach must also be associated with expectations of independence--which does not seem to be a direct relationship.

Authoritarianism, as a motive, sharply differentiated the M.C. from the other industrial groups. We assume that the traditional societies are also authoritarian, but there is no data for the groups of this study. Authoritarianism may be the world-view of the uneducated--and is antithetical to economic growth. Adherence to authority (or tradition) hinder the adaptation of new social forms or occupational roles. Authoritarianism is the polar opposite of rationality--which is a prerequisite to the functioning of technological economy.

Independence--as an expectation of child performance, sharply differentiated the M.C. from the other groups. While mobility will be through the corporate channels, independence of thought and action are of utmost importance to the modern business structure. Data not reported, show that the M.C. are likely to be highly geographically mobile in the course of occupational mobility. Contrary to the social critics of the "conformist society" school, this data indicate the opposite, those that are most successful are those who can establish and break social ties and remain functional actors. We also note that the F-scale data show the M.C. to be the least "conventional" of the industrial groups.

With the isolation of these parameters, the question is raised on how they can be influenced[7]. It would seem that the problems should be considered in the schools which will attempt to offset the negative influences within the family boundaries of the traditional groups. Research is needed in these ways and suggestions must be tentative.

The first consideration should be in terms of the relation of man to the world. The belief in personal efficacy could be fostered in young children through emphasis on science and technology. Those accomplishments like the building of dams, reversing rivers, changing the weather, growing hardier and greater crops, the progress of medicine should be emphasized in the early grades. Of course, it should be put into terms which the children can easily comprehend--and have specific cultural relevance.

The n-ach, as well as independence should be fostered without emphasizing competition--which may conflict with certain other cultural values. Teachers could do this by emphasizing individual tasks and rewarding evidence of this behavior. In the groups where this should be fostered, the emphasis on getting along with others should be minimized and unique accomplishments should be accented.

Finally, an egalitarian leadership should attempt to counteract an authoritarian family background. Democratic direction does not mean laissez faire which would accomplish nothing[8]. Rather, teachers should guide and foster students to work out their own problems and not rely on peers or superiors.

Summary

Theoretically, the economic practices of a group will determine the social structure, ideology, child rearing practices and distributions of personality characteristics of that group. To test these assumptions, a cross-cultural study was conducted in these groups of differing occupational forms; trappers, horticulturalists and participants in industrial society which, due to inherent stratification, considered three social classes. Subjects were selected and interviewed with questionnaires, semi-structural, and projective techniques.

The economic role will affect the evaluation of work, orientation to time, and evaluation of the power of man in relation to nature. In some cases however, the effect of the subsistence economy is mediated through the social structure. In industrial society, socio-economic class was correlated with needs for achievement, reliance on self as opposed to authority, and socialization practices such as fostering independence, individualism, which lead to greater n-ach. The geographical mobility of the group, in value, if not in fact, will be related to the socialization practices fostering independence.

The findings indicate that research in these directions can be fruitful and that further investigation and clarification is needed. This research has implications for social change in general, and economic growth in particular.

FOOTNOTES

[1]See page 1 of this paper.

[2]Recent evidence suggests that the intellectuals may no longer be outside the mainstream of industrial society, rather they are the forefront of a mobility pattern based on achievement--but not necessarily financial reward.

[3]The author wishes to extend his deepest thanks to Mr. Refugio Vermont of Merida, Yucatan, Mexico, and Mr. Thomas Archibald of Moosenee, Ontario, Canada, without whose cooperation this study could not have been done.

[4]The rationale for this decision is that trading or bargaining is implicitly competitive--not only with the other party buyer or seller, but the attainment of getting the better deal, which we would define as a high standard of excellence.

[5]See the works of Marx, Weber, Simmel, Durkheim, Park, Fromm, and such anthologies as Identity and Anxiety, Stein et.al, eds., Glencoe: The Free Press, 1960, and Mass Society in Crisis, (Rosenberg et.al., eds.), New York: Macmillan, 1964.

[6]Every affluent economy which is generally a "consumption economy" had to develop from a "production economy" in which the wages of the working class were suppressed--by management in the "capitalistic" economies or the state in the "socialistic economies". Again, the facts of economic growth are often in conflict with certain democratic principles.

[7]The moral question of whether they should be influenced,or by whom, must be born in mind.

[8]See Lippsitt.

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